

Waste Spills Into Wabash River

By J. BLAINE AKERS
Star Staff Writer

Recurring problems between the city administration and union employees of the wastewater treatment plant arose again Thursday night when the Terre Haute City Council voted to give two plant management workers a \$3,000 pay hike.

The problems were compounded by the fact union employees earlier in the day contacted the State Board of Health after six million gallons of raw sewage reportedly was poured into the Wabash River when a stem on a valve broke Wednesday night at the plant south of the city.

Relations between union employees and Mayor Pete Chalos have been strained since Chalos reduced overtime and standby hours for most union employees and took away take-home vehicles driven by some supervisory workers. Complicated by the fact wage negotiations for a new contract did not begin until grievances were settled between the two parties, union workers struck for one day before signing a memorandum of understanding with the city administration.

Floyd Cheesman, union steward,

S JUL 11 1980

said the pay raise authorized Thursday night for Clarence "Soup" Harris and Frank Hoole were "not right."

Cheesman said the two employees, both retired firemen who were hired at the beginning of the year, "know nothing about the sewage plant."

"A pay raise for these men is not right. They don't deserve it because they don't do anything really," Cheesman charged.

A fellow worker, Delbert Walters, said it was not Harris and Hoole who operated the sewage plant after superintendent Quincy Whiteman, but instead Gary Loudermilk, assistant superintendent.

"If any management employee deserves a raise it's him," Walters said of Loudermilk, the son of Police Chief Gerald Loudermilk.

According to Dick Culver, an operator, the State Board of Health was called Thursday morning after he learned raw sewage was pumped into the river when a valve "air locked" breaking off a stem.

Culver said if a maintenance man would have been called in overtime to repair the valve the problem could have been corrected in about 10

minutes. He said the problem occurred at about 7:30 p.m., but the valve was not fixed until maintenance crews reported at 6 a.m. Thursday.

The mayor said the raises for Harris and Hoole bring their salaries in line with other administrative employees. City Controller Tharon Geckeler said the men were earning between \$8,246 and \$8,988 before the pay increases. She said neither man was paid additional overtime.

Chalos said the average employee at the sewage plant receives between \$14,000 and \$14,500 per year. Union employees said the mayor was including the amount of overtime and standby pay in his estimate.

The mayor previously said overtime hours were abused by employees at the plant and instructed management employees to cut back on overtime hours allowed. Financial records of the city indicate one employee has received more than \$2,600 in overtime pay during the last six months. The average overtime amount earned during the last six months was between \$400 and \$500.

Wabash River in good health Purdue professor's study shows

By Dick Robinson
Tribune-Star Staff Reporter

The Wabash River is in good health, with tons of fish, and the fishing is perhaps as good as it has ever been.

Professor John Bell, environmental engineer at Purdue University, said water samples show the Wabash River is able to cope with the pollutants discharged into it. Bell said he was finding nothing really bad in the river.

Two mornings a week this summer Bell has gathered water samples from Lafayette to Attica.

The first sampling of river water south of Terre Haute is scheduled today. Bell was in touch with the Weston Paper and Manufacturing Co. on Friday to determine the amount of water flow. If it does not rain, Bell will be in the area to sample water south of Terre Haute.

Data collected by Bell eventually will provide a model to determine the effects of discharging particular types and amounts of pollutants into the river.

"We're trying to get the best possible model of what will happen so the state can tell industry what amount of waste they can put into the river," Bell said. "With the type of guidance, a company planning a new factory along the Wabash will know in advance how much sewage-waste treatment to include in the facility."

Bell said he has worked closely with area firms, such as Weston, International Minerals and Chemical Corp. and Eli Lilly and Co.

Separate studies show fish abound in the Wabash, and it has been years since a major fish kill. The last major kill in the area was in 1977 near Montezuma, according to Bell.



Purdue University photo
Surveying: John Bell uses an airboat to get samples

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Polution Is Found In The Wabash River

Rockville Republican 11-15-76

Preliminary findings on water quality in a six county area were announced Monday night, November 8, at the 208 Water Quality Program's Advisory Committee meeting of the West Central Economic Development District (WCIEDD). Those counties in the district are Parke, Clay, Vermillion, Vigo, Sullivan, and Putnam.

Staff technician David Clark noted that in the WCIEDD six-county area, Wabash River tributaries are the problem areas. Staff members have found

that Honey and Otter Creeks in Vigo County and Busseron Creek in Sullivan County contain high amounts of dissolved solids originating in mining regions near the streams' headwaters. Honey Creek and Vermillion River have a high nitrate content which can cause health problems when the water is consumed. Several streams in Sullivan County have very low levels of dissolved oxygen, which is necessary for aquatic life.

Clark also reported that along the Wabash River, discharges of high amounts of potential pollutants have taken place. In the Clinton area a large amount of ammonia and nitrates have been found in the river, as well as indication of thermal pollutants raising the river's temperature. In the Terre Haute area, there have been several instances

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✓ Pollution

(Continued From Page One)

when the amount of ammonia in the river has been extremely high and the water extremely alkaline. Examples have also been found of highly discolored discharges with high solid contents.

Several small towns in the six-county area have been found to have problems with sewage contamination of nearby streams. Bacteria indicating sewage contamination has been found in high levels near Carlisle in Sullivan County, Newport in Vermillion County, and Russellville and Bainbridge in Putnam County.

In other business, Rasoul Istrabadi, water quality staff engineer, reported Environmental Protection Agency guidelines for establishing user rates for sewage treatment facilities. Only three methods are authorized, when all users contribute pollutants equally, when pollutants exceed the range of normal domestic sewage, and the third is called quantity-quality, when unusually strong industrial or commercial waste is discharged into the system.

Further data will be submitted to the advisory committee as it becomes available from consulting laboratories.

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Wabash River

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Abandoned Coal Mines Help To Create Pollution Of River

Pollution (T.H.)

DEC 21 1972

EDITOR'S NOTE - The following is the third in a series of articles concerning water pollution and Wabash River environmental problems.

By **BILL MABIN**
Star Staff Writer

Abandoned coal mines are creating pollution problems for the Wabash River and its tributaries. The problems are not new and little has been done to correct the situation since the mines were closed.

Laws now require mine operators to reclaim land after mining has been completed, but there are many sites in Indiana and in other states where mines

were abandoned before such laws were passed or began being enforced. One such mine is the old Green Valley Mine in western Vigo County near the Fayette-Sugar Creek township line.

The mine has been labeled an eyesore and pollution and health problem for many years by area residents, according to local attorney John Kesler. The main problem is acid mine drainage which pollutes a western branch of Sugar Creek and eventually the Wabash River.

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Kesler, former state representative and a western county resident, has been interested in the mine pollution problem for many years. He had planned to introduce legislation to attempt to correct such situations, but those plans ended with his defeat in this spring's primary election.

The pollution problem results from gob piles and rain. Gob, the shale-like waste from the many years of mining, is piled in high mounds at the site. The gob contains sulphur and iron.

When rain falls, a chemical reaction occurs yielding sulphuric acid and ferrous sulphide. The rain washes the substances into

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Environment

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the stream giving it a yellow-orange color.

According to Kesler, the discolored stream produces an odor. Cattle won't drink from the branch stream and farmers have reported cattle deaths when animals did drink the water. The attorney said the pollution has also seeped into a state-owned lake near the Green Valley Mine.

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A study conducted in 1965-66 by Indiana State University life sciences faculty member Dr. John Whitaker found no fish existed in the branch of Sugar Creek which flowed through the mining area. His report also states, "at times there were no fish in the main branch below this stream."

Dr. Whitaker's study found that the small numbers of fish discovered in polluted waters were all river species. These were fish accustomed to polluted waters and could survive there while stream species existing in other Sugar Creek branches were not found in the polluted areas.

According to Kesler, the coal mine was operated for many years by the now defunct Green Valley Mine Company which sold the 80-acre site to the Peabody Coal Company. The company mined the land for a short term, closed the mine and sold the land to the Sugar Creek Valley Corp.

The Sugar Creek Valley Corp. is owned by two Paris, Ill. men who bought the site for salvage purposes. Kesler said the present owners stripped mine buildings, equipment and railroad tracks and sold the materials as scrap. Kesler described the site now as a "vast wasteland of nothing."

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A similar stream pollution problem exists in the north central part of the county on the north branch of Coal Creek

downstream from the abandoned Snow Hill Mine.

The Federal Environmental Protection Agency has filed suit against the Peabody Coal Company charging pollution by the Snow Hill Mine. The suit filed in Terre Haute Division of U.S. District was the first case ever brought by the government in the Southern District of Indiana under terms of the Refuse Act of 1899.

The federal complaint asks for a court order enjoining the coal company from allowing the acid discharge to continue and requiring the company to control or eliminate the discharge by the use of proper land management techniques.

The Whitaker fish study found that for most of its length Coal Creek is a clear, non-polluted stream. The north branch originates above the mine and contains fish, but after going through the mine area the stream is discolored and contains no fish. Also, no fish exist in the main branch just below the mouth of the north branch. Chemical tests just below the mouth of the north branch showed dissolved oxygen was entirely lacking in the water.

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The section on Coal Creek in Dr. Whitaker's report concludes, "It would appear that fish were absent in the mining area because of the lack of oxygen."

A challenge to the Environmental Protection Agency's enforcement of the 73-year-old refuse law has been upheld in a lower court in a Pennsylvania case. The U.S. Supreme Court has announced it will rule in the case in its current term. The forthcoming ruling may affect the suit against the local mine.

Acid mine drainage is only one of many water pollution problems, but it is one easily identifiable. However, the problem is much harder to eliminate than to discover.

Next: What to do with an abandoned mine.

Alexander the Great of Macedonia died at the age of 33 of fever, in Babylon.

...on crutches. With his great...

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ISU Seeks Funds For Study Of Pollution By Area Mine

DEC 29 1972

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EDITOR'S NOTE — The following is the fourth in a series of articles concerning water pollution and Wabash River environmental problems.

By **BILL MABIN**
Star Staff Writer

Solving the problem of acid mine drainage is no easy task, but Indiana State University students hope to investigate the pollution issue this summer.

Dr. Howard Dennis, ISU geography professor announced the university has applied for a National Science Foundation grant to fund an 11-week study of the Green Valley Mine in western Vigo County. The grant application is expected to be reviewed soon.

The Green Valley Mine is one of many abandoned coal mines in the state. Acid mine drainage results when rain falls on the high mounds of mine gob left by the many years of shaft mining. The gob contains sulphur and iron and a chemical reaction occurs in the wet gob piles releasing sulphuric acid. Drainage from the Green Valley Mine washes into a branch of Sugar Creek and eventually flows into the Wabash River.

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The full effect of the acid mine drainage is not yet known. The Sugar Creek branch is so polluted fish life is restricted and cattle illnesses have been

reported after animals drank from the stream.

The problem is finding a practical and economical solution to ending the drainage. The only presently recommended method is to cover the gob piles with at least three feet of dirt and then planting shallow-rooted vegetation. Estimates for covering the piles at the relatively small Green Valley Mine site are about \$1 million.

Covering the gob piles prevents rainwater from starting the acid-producing reaction. Shallow-rooted vegetation is required as plants with tap roots would die when the roots reached the acidic gob.

The proposed ISU study would determine the types and sources of the pollution and its impact on the area. The study would include physical, chemical and

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On Page 8, Column 2

mitted to the National Science Foundation's Student Oriented Studies (SOS) program. Dr. Dennis believes the ISU application is the first in SOS program to study pollution effects of an abandoned shaft mine.

The scientific studies would investigate the extent of pollution of Sugar Creek and the Wabash River and on area ground and surface waters. Also studies would be effects on plants and animals living near or in the waters and the pollution's relation to soils.

Even if this study or others can recommend alternative methods of ending acid mine drainage, the big question of getting money to implement possible solutions remains.

John Kesler, former state representative and a western county resident, made the Green Valley Mine pollution an issue in his unsuccessful campaign in the 1972 primary election. Kesler, a local attorney, said he has been concerned with the mine problem for many years.

He and Dr. Dennis testified about the problems this summer before the State Board of Health. Kesler said those officials have been aware of the situation for many years and were cooperative. But Kesler said, "They have the perfect excuse. They haven't got the money."

It is doubtful the present mine owner has the resources to pay for any pollution solving project. According to Kesler, the mine is now owned by the Sugar Creek Valley Corp., a salvage firm operated by two Paris, Ill., men which stripped the mine facilities for saleable scrap materials.

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Dr. Dennis emphasized that while the mine's polluting effect on the Sugar Creek branch is unquestioned, the impact of mine pollution of the Wabash River has not been determined. The economic impact studies in the proposed ISU project would weigh benefits of ending the pollution against the cost of doing it.

A question might then be. Is it worth \$1 million or so to solve a problem possibly directly affecting a limited number of people and a small area? If this answer is yes for any amount of money, the federal and state governments will probably be the ones to provide the money.

Kesler has suggested that once the Green Valley Mine site is renovated it should become a county or state park or possibly a golf course. He said such a park is needed in the western part of the county.

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DEC 29 1972

Environment

Continued From Page 1

biological analyses of the polluting influences of the mine and also would cover economic and social affects of the pollution. The grant application asks for money to employ 12 students for 11-week summer program.

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The grant request was sub-

POLLUTION

Clean Wabash River Here Will Curtail Odors of Past

By PHIL JUNKER

Almost every community has one or more landmarks by which it is recognized. Many also have certain characteristics for which they are known. Such is true of Terre Haute.

Terre Haute has its Wabash River, Fort Harrison and other landmarks, but one of its most famous characteristics will soon pass with the wind.

Terre Haute's riverfront odor

will soon be a thing of the past, according to Ray Harris, city engineer.

During warm days the odor is increased. The hotter and balmier the weather, the worse the smell becomes.

Harris explains that the familiar odor, which is as old as Terre Haute, is caused by "sludge pits" in the Wabash River where sewage has collected. When the river level

drops and the weather becomes warm the winds carry the stench over the city.

During several days last week the odor was noticeable and Harris commented that he noticed the smell as far east as Eighth street while en route to work.

Sees Big Improvement.

"It will really make a difference when the new sewage plant and sanitary sewers begin operation," he said. No longer will the raw sewage pollute the river.

"The people will really be pleased with the difference it will make," Harris continued.

TRIBE ON WARPATH

MANILA, May 11 (UPP)—Headhunting Ilongot tribes beheaded two persons Friday night, bringing to nine the number of Christians killed by the primitive tribesmen in the past three weeks, it was reported Saturday.

"The river will really be clean and the smell will be gone."

He pointed out that upon the end of the pollution a great improvement will be made in the river for fishing and other recreational purposes.

When questioned about pollu-

T. H. TRIBUNE-STAR.

tion from upstream he said that such pollution is almost nihil and that any places where the river is still being polluted are far enough up the river that the waters have "purified" themselves by the time they reach Terre Haute.

The main pollution in the river now is from Terre Haute, he said, "so when it ends we will have a clean river."

Among Arabian gifts to European medieval society were the art of fortification, knightly tournaments and the troubadour.

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VANCE HARTKE

United States Senator



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HARTKE: STUDY BLDED TO ASSURE
WABASH DRINKING WATER QUALITY

WASHINGTON, D.C., Dec. 17, 1974 -- Senator Vance Hartke and two organizations devoted to land and water resource development in the Wabash River Valley have joined forces to see that the waters of the Wabash and its tributaries are fit for human consumption.

Hartke is working with Irvin Schenk, Chairman of the Board, Wabash Valley Association; Maynard Wheeler, President, Wabash Valley Association; and George Gettinger, Executive Director, Wabash Valley Interstate Commission, to inaugurate a plan for analyzing drinking water sources in the Wabash River Basin.

The focal point of such a study would be the Wabash River and its tributaries -- a system draining 33,000 square miles of land and providing water for more than 4 million Hoosiers in 66 of Indiana's 92 counties. From its source near Fort Wayne, the river basin extends downstate, encompassing more than 300 Indiana communities, until it meets the Ohio River near Mount Vernon.

Hartke explained that historically, the basin has been plagued by floods and pollution.

"Tons of valuable and irreplaceable topsoil, together with incalculable amounts of property -- and lives -- have been lost over the years to the forces of uncontrolled water. Likewise, much fish and wildlife habitat, recreational opportunity and human health have been destroyed or endangered by the effects of pollution," said Hartke.

-more-

"Fortunately, the seriousness of these water problems was recognized before the people of the Wabash Valley were overwhelmed. Largely because of men like George Gettinger, Irvin Schenk and Maynard Wheeler -- and their forerunners -- Congress responded to the needs of the Wabash Valley with a program of flood and pollution control."

The Senator noted that since the early 1950s, six major multi-purpose reservoirs and scores of smaller watershed projects and local levees have been constructed in the Valley. These efforts have reduced flooding, enhanced recreational opportunity and provided more stable water supplies for municipal and industrial use. Additionally, the program has led to the possibility of opening up the Wabash River to navigation, tapping the region's vast food and coal reserves.

"Making the Wabash navigable will one day transform Southwestern Indiana from a virtual 'Appalachia West' into a thriving, booming 'Water Wonderland'," commented the Wabash Valley Association's Wheeler.

"Having met the problems of flood control and water supply more than halfway, the next great challenge is to insure that every man, woman and child in the Valley has safe drinking water," declared Hartke. Noting that existing water analysis in the Basin consists largely of tests for inorganic substances, Hartke said, "Monitoring must be expanded to look for the newer organic compounds which are being used increasingly in agriculture and industry. We have the technological capability to look for these newer and potentially harmful ingredients. The health and well-being of our people is reason enough to apply that technology."

Hartke said he and his staff will work closely with both the Wabash Valley Association and the Wabash Valley Interstate Commission to draw up a plan for water testing. He indicated that implementation of that plan would ultimately involve every level of government together with elements of the private sector.

"In the end, we want nothing less than a successful model of water analysis which can be applied in every river basin and watershed in this country," Hartke explained.

T s JUL 1 8 1983

Mistreated Wabash River deserves more attention

Extolled in song, used by early explorers and pioneers as a means of transportation, a thoroughfare of commerce through the early history of the area, a rampaging torrent sweeping away all in its way and a source of water for people and industry, the Wabash River now deserves better than it is being given.

While people have multiplied the problems of the river with pollution, sewage, top soil from farms and debris of trees and trash, the river today is much cleaner than 20 years ago. There is still much to be done, and it all costs money.

Next to the Ohio, the southern boundary of the state, the Wabash is the state's largest and most important river. Not that there is any transportation on it, except for a few miles near the mouth, but its watershed is the largest in the state; White River, the Tippecanoe and the Eel River up north empty into it.

There have been periodic promotions to channelize the river, which would mean barge tows, hauling grain and coal to the Ohio, and probably minor industrial hauling. But the cost of dams, locks, dredging a channel and water storage sites of thousands of acres, made this project unfeasible.

Two steps are often suggested for improving the river: 1) reduce pollution from industry and farms; and 2) further improve waste treatment plants to reduce sewage pollution. Most towns along the river have treatment facilities, but they can be updated to reduce waste contamination. Improved farming methods can further reduce contamination from insecticides, farm chemicals and fertilizer. Perhaps sometime in the future, some of the debris that is caught in sandbars and along the banks can be cleared. Priorities would have to be determined, but the natural resource of water should be protected.



Main Street

By Richard
Tuttle

*Tribune-Star
Assistant Editor
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Pollution

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Xylene leak danger appears to be easing

Water Pollution (Ind.)

DEC 17 1977

Wabash River

Community Affairs File

By JACK HUGHES
Tribune Staff Writer

As the immediate danger from the xylene leak into Spring Creek and the Wabash River appeared to lessen, some attention began to focus on both the past and the future.

Future concerns include measures assuring against another leak in the long pipeline which apparently failed near Danville, Ill., releasing the chemical destined for northern Alabama less than 200 miles from the point at which the trip started at Whiting, Ind., near Chicago.

That turns attention to the past and just what caused the "major spill" leak from the oil company pipeline into farm fields and through the ground and drainage structures to the creek and the river. While no information on corrective measures at the leak site has been released by the Amoco Division of Standard Oil, contract crews continued clean-up operations over at Spring Creek and in area drainage ditches.

"We know where the leak is, but we shut off the flow and our first priority is to clean up Spring Creek, try to keep the

chemical out of the Wabash River, and make sure there is no danger to people," was the tenor of earlier reports from company officials who said they would only then turn to repairs and recovery of their own equipment and materials.

Reports also indicated that the volatile nature of xylene may have required a period of time for dissipation of fumes before digging at the leak site could safely proceed. Although reports Friday indicated that danger had passed, the characteristic odor of the chemical remained pronounced in the area along I-74 just east of Danville interchanges.

Vermillion County (Ind.) Sheriff John Rauchbach said Saturday that future concerns include the possibility of later effects from ground soaked with xylene. He spoke of concern for next year's crops on portions of seven large farms in the path of the xylene travel from the pipeline to the creek. Some ground may have to lie dormant for a year and may require heavy applications of lime, he said.

He also noted that the clean-up crews continued working around the clock and are expected to remain for some time to come. He said he closed a two-mile stretch of the Rileysburg Road Friday evening at the request of the workers to give them full access to the area without interruption by normal traffic.

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Community Affairs File

Xylene threat to waterways removed

DEC 24 1977
The threat to the Wabash River from xylene in the recent oil company pipeline leak has ended, according to an official of the Indiana Stream Pollution Control Board.

Oral H. Hert, technical secretary of the board, announced an "all clear" for residents along the river near Terre Haute. He said, "Laboratory analyses on samples collected Dec. 21 indicate xylene concentrations below any detectable level at the confluence of Spring Creek and the Wabash River."

It was reported further that clean-up contractors employed by the Amoco Oil Co., Whiting, owner of the pipeline, began pulling out of the scene on Tuesday evening and that "Additional precautions were taken to catch any remaining xylene leaching from the soil at the spill site."

Hert added, "According to Amoco spokesmen, xylene has an extremely high evaporation point and will float on top of water until it evaporates. This leads us to believe that the emergency situation is over; however, we will continue to monitor the streams to assure that the situation remains in control. Amoco representatives have indicated that xylene evaporates so quickly it is anticipated there that there will be no damaging residue from floodwaters on adjacent farmland."

The report noted that the problem was first identified by an Indiana Conservation Department officer (Ken Nelson) investigating a fish kill complaint two weeks ago in Spring Creek. He reported to the state health board which in turn notified both state and federal EPA representatives, prompting a check with the oil company and clean-up operations which ensued.

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EPA sees no lasting harm from xylene

Wabash River Community Affairs File
Water Pollution (Int.)

By ROB ALLEN
Tribune Staff Writer

DEC 16 1977

The on the scene coordinator for the United States Environmental Protection Agency said Friday that "no noticeable or environmental damage" can be expected from the xylene spill in Spring Creek "due to flood water conditions."

Ralph Coons, the EPA man heading the emergency clean up at the area near Perrysville, said the estimated 100,000 gallons of xylene that leaked into the stream should have no "lasting effect."

Coons added that a small amount of the chemical continues to trickle from the leak, but that should be cleared up soon. Emergency activity at the scene could be terminated Friday night or Saturday, he said.

The spill is not expected to have adverse effects downstream either, according to Coons, but he said the situation will be closely monitored.

The majority of xylene was sucked into tank trucks and about 50,000 gallons has been removed from the scene and taken to a holding area.

The spill is said to pose no danger to persons in the area in Illinois, according to federal officials. However, some xylene remains in the Wabash River.

Because of that and as a general precaution, Terre Haute Water Works operations manager Bob Bass said well water will be used "until we hear everything is okay."

A natural ice dam slowed the creek's flow into Wabash River near Perrysville which aided clean up crew efforts Wednesday.

State Conservation Officer for Vermillion County Ken Nelson said the removal of xylene has brought a definite difference to the area. He said the smell was cut greatly.

The amount of chemical that spilled into Spring Creek and eventually flowed in the Wabash has not been officially confirmed but estimates indicate more than 100,000 gallons leaked out. No dollar damage amounts have been released.

The pipeline, owned by Amoco Division of Standard Oil, sprung a leak near the Indiana-Illinois border near Interstate 74 east of Danville sometime last week.

The xylene flowed into a ditch near the leak and then started its crawl to Spring Creek. First reports of a problem came Sunday when cattle deaths, fish kills and strong odor complaints were received.

Dams were built in Spring Creek by workers but some gave way Tuesday night and opened the way for the toxic substance to move downstream.

Wednesday Amoco workers and O.H. Materials Inc. crews worked throughout the day and night to set up more traps to catch xylene.

Mother Nature helped in that effort by holding the chemical in the creek with ice flows that dammed the area.

The material started its way to eventual danger potential in Whiting Ind., where the pipeline begins. The ultimate destination was to be northern Alabama. It was reportedly the first time a substance was pumped through the pipeline, which is eight inches in diameter.

The xylene, which is said to be an expensive chemical, is to wind up back at the Whiting refinery after it is gathered off the creek and river.

Wabash River
T. DEC 13 1977 Community Affairs File

Mother Nature gives aid at spill; ice flow blocks chemical from river

By JACK HUGHES
Tribune Staff Writer

Mother Nature, who has complicated human efforts to remove the xylene spill in Spring Creek, lent a hand overnight, according to reports that an ice flow where the creek enters the Wabash River was holding the chemical in the creek and away from the river.

"Also," reported Chuck Mason of the oil company whose pipeline is said to be the source of the chemical, "the river is high and getting higher. That puts a kind of back pressure against the creek and that's one of the best things that has happened to us."

Meanwhile, five pumps working through the night have removed an estimated 40,000 gallons of xylene from the creek to a lowland "containment pond" hastily prepared.

Also, Terre Haute Water Works officials decided to continue using well water only for several days until all threat of river contamination from the chemical leak is gone. "We probably won't even think about using river water again until we hear from the State Board of Health that everything's Okay — probably next week sometime," said Bob Bass, water company operations manager.

The work crews manning pumps and setting up containment structures — including both straw- and earth-dams — are from private contractors employed

Xylene, what is it and what are its uses?; story, page 3.

by the Amoco Division of Standard Oil, working with state and federal health and environmental protection agencies.

Mason said they were "very optimistic" Thursday after successful pumping operations from several different locations on Spring Creek during the night. "We got about 15,000 gallons from one pump alone," he said, adding that while the material pumped included both chemical and water, the water was thought to be not more than 25 percent of the total.

He said the total amount which had leaked from the pipeline near Danville, Ill., was unknown, although the flow had been stopped. He pointed out that the pipeline had just been a short time in service and, since it was not full, it was impossible to determine immediately the full extent of the loss. "All we can say at this time is that the official EPA description of 'a major spill' seems to apply since that refers to a spill of 10,000 gallons or more." Other sources have reported figures of 250,000 gallons or more. A company spokesman said that a figure attributed to the EPA, between 200,000 and 400,000 gallons, was "way too high."

Concern reportedly grew when another leak, from a faulty valve, prompted a number of residents of the Humrick

area to leave their homes. However, that leak was described as "very small," making considerable odor, but posing no real threat. It is noted that xylene is strongly aeromatic.

An Amoco spokesman earlier said that the company was making the cleanup "first priority" and would only then look to repairs and assessment of loss to the company. He noted that this was in spite of the fact that the chemical in question, "is very expensive stuff."

Earlier efforts to contain the xylene were hampered by thawing, muddy fields and other weather-related problems. High water reportedly washed out some of the first containment structures prepared.

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Xylene - What is it?

DEC 16 1977

By JACK HUGHES
Tribune Staff Writer

Xylene, the chemical believed leaking into area streams from an oil company pipeline near Perrysville, is a strong-smelling, poisonous and combustible substance and "good stuff to stay away from," according to reports from authorities Wednesday.

Its "strongly aeromatic" characteristic is "a point in its favor" as far as warning of its presence, according to officials heading up the investigation which may continue long after danger has passed. Involved are the health agencies of Indiana and Illinois as well as local officials, the Environmental Protective Agency offices of both states and the federal government and others.

"You'll smell it before it makes you sick," said one official who noted further, however, that continued breathing or ingestion could lead to serious complications involving the liver and other organs. Several cows died or had to be killed during the few days since the leak was inferred from a fish kill in Spring Creek.

The leak is suspected in a six-mile stretch of pipe between pumping stations alongside the Indiana-Illinois line on either side of the point the substance first was found by a conservation officer. That's near I-74

where a yellow, oil-based material was found coming out of a farm drain tile. The pipe between the stations holds 13,000 gallons per mile and the leak is suspected to involve between 50,000 and 84,000 gallons of xylene.

Said normally to be clear, it can take on an amber cast in processing and may be used in a wide variety of production processes, including paints, rocket fuel, and many others. It is a coal-tar derivative resembling toluene.

Wabash River Pollution Joint Study Underway; Montezuma To Riverview

S JUL 15 1977

Water Quality Study 207

Community Affairs File

By GLADYS SELTZER
Star Staff Writer

In an effort to determine just how much pollution is too much pollution for the Wabash River, a joint study by three groups is underway of the stretch of the Wabash River from Montezuma south to Riverview, a community just south of Hutsonville, Ill..

Involved in the study are the 208 Water Quality Management Plan staff of the West Central Indiana Economic Development District; Eli Lilly Company and the State Board of Health.

The Lilly Company has requested the Indiana Stream Pollution's Control Board to modify the permit of the firm's Clinton plant for the discharge of effluent into the Wabash River.

According to the 208 Water Quality Management report, the modification as requested by the company would increase the allowable discharge load of ammonia to the river from 650 pounds per day to 1,800 pounds per day on a monthly average, and from 1,300 pounds a day to 2,500 pounds a day as a daily maximum for ammonia.

The present new limits as required beginning July 1 are now being adhered to by the company. John Burke, manager of environmental controls and utilities at the Clinton Laboratories, said earlier this week. These limits set an average discharge of 650 pounds a

day or a daily maximum of 1,300 pounds. The average must be 650 pounds or below.

In his testimony June 23 before Oral Hert of the State Stream Pollution Control Board, Burke stated that the issuance of a modified permit "will be in keeping with water quality standards to which we are dedicated" and "an acknowledgement that the assimilative capacity of the Wabash River is clearly sufficient to accommodate the requested modification...without endangering the river."

However, the report of the 208 Water Quality staff, presented during the June meeting hearing and later to the State Pollution Control Board, stated that the staff had studied the stretch of the river and prepared a wasteload allocation "which differs in key respects from the data and conclusions of the studies conducted by Eli Lilly Company."

The 208 staff recommended a daily average loading of 900 Ammonia is of special concern in the allocating of waste loads because it is both a toxic substance and an oxygen demanding substance.

The 208 staff last October collected samples from 12 different stations on the Wabash which were found to exceed federal quality criteria for water guidelines for ammonia. Six of these samples also exceeded ammonia values recommended in guidelines set by the State

Board of Health and Stream Pollution Control Board. Samples taken on other dates also exceeded both state and federal guidelines for ammonia, according to the 208 report.

The 208 report also cited the study by Dr. J. R. Gammon of DePauw University on fish populations of the middle area of the Wabash which showed that "there is a significant decline in the 'index of well-being' values for fish populations" in the Montezuma-Clinton area of the Wabash and that this area contains far fewer gizzard shad than any other part of the river.

Burke at the hearing explained that treatment of wastes was considered an integral part of the chemical process design of the Clinton Laboratories, which began operating in 1970.

"The company's dedication to the protection of the environment is evidenced by the fact that one out of every nine dollars, or over \$15 million, of the total plant investment at Clinton is dedicated to environmental controls," he said.

He also outlined the company's efforts to study the assimilative capacity of the river and to evaluate the technologies for ammonia removal. These included the retaining of Dr. Noel Moore, of the Rose-Hulman Institute of Technology, to aid in the technology evaluation and studies by Dr. John M. Bell, Purdue Univer-

sity, on the assimilative capacity of the river, and by Dr. Thomas J. Tuffey, formerly of Rutgers University, who studied nitrification in the river.

According to Burke, the studies by Bell and Tuffey have supported the conclusion that the Wabash River has a greater capacity for assimilating ammonia nitrogen than was originally believed.

Burke's conclusion was that the assimilative capacity of the river was "clearly sufficient to accommodate the requested modification and to satisfy the increasing needs of municipal systems and new and expanding industries in the Wabash Valley, benefitting the entire area

through continued economic growth without endangering the river or its users and without adverse environmental impact."

In submitting the 208 project report, Richard White, West Central executive director, noted that "we respect the company's (Eli Lilly) effort to determine the impact of its waste loading on the Wabash," and also that the joint study "may help to verify the impact of the proposed discharges on the Wabash" and "help us determine the validity of the wasteload model which we will use in preparing our water quality plan."

The Stream Pollution Control Board was asked to consider

the 208 report in the evaluation of the proposed permit modification of the permit under which Lilly now is operating since July 1.

Burke said Thursday that there had been no response as yet from the Board and one was not expected until later this month at the earliest. He explained that there has to be a review process by the hearing officer, followed by his recommendation to the technical secretary of the Stream Pollution Board.

The State Board will send a report of its decision to the Environmental Protection Agency which as a national agency is responsible for the permit program generally.

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Tributaries Main Problem

NOV 10 1970

Water Quality Study 208

Wabash River

Committee Studies Pollutants

Preliminary findings concerning discharges of potential pollutants in the Wabash River and in the Wabash River area were presented recently during a meeting of the advisory committee of the 208 Water Quality Management in Terre Haute.

The report of the findings was presented Monday evening during a regular session of the advisory committee.

The report contained preliminary findings in the six-county area served by the West Central Indiana Economic Development District which has jurisdiction over the 208 project directed by Robert Stalcup.

David Clark, staff technician, gave the report and said staff members found Honey and Otter creeks in Vigo county and Busseron Creek in Sullivan county contain high amounts of dissolved solids originating in mining regions near the streams' headwaters.

Honey Creek and Vermillion River have a high nitrate content which can cause health problems when the water is consumed. Several streams in Sullivan county have levels of dissolved oxygen too low to sustain aquatic life such as fish and water plants.

Clark also reported that in the Clinton area a large amount of ammonia and nitrates have been found in the river, as well as indication of thermal pollutants raising the river's temperature.

In the Terre Haute area there have been several instances

Community Affairs File

when the amount of ammonia in the river has been extremely high and the water extremely alkaline. Examples have also been found "of highly discolored discharges with high solid contents," according to the report.

Clark also noted that several small towns in the six-county area have been found to have "problems with sewage contamination of nearby streams." Bacteria indicating sewage contamination has been found in high levels near Carlisle in Sullivan county; Newport in Vermillion county and Russellville and Bainbridge in Putnam county.

Stalcup said more reports on

findings will be forthcoming as additional testing results are received on stream and river pollution.

He explained that a high nitrate content if consumed in drinking water over a long period of time has been shown to cause severe illness in infants, sometimes fatally.

Stalcup also said public water companies are not required by the State Board of Health to periodically test their well water for fecalcoliform, an indicator of human waste contamination. Only at the initial drilling of the well is this test required. The 208 staff believes there should be periodic testing for

fecalcoliform contamination for all raw water supplies.

In checking water companies in the District, the 208 staff found that only a "a few" had made periodic fecalcoliform tests, according to Stalcup.

He explained also that the state tests only for residual chlorine content and these tests do not reflect the quality of water before it is chlorinated. Therefore, after chlorination, there is no way of proving fecalcoliform content.

In other business at the meeting, Rasoul Istrabadi, water quality staff engineer, explained Environmental Protection Agency guidelines for establishing user rates for

sewage treatment facilities.

Three methods only are authorized: one when all users contribute pollutants equally; another to be used when pollutants exceed the range of normal domestic sewage, and the third, called quantity-quality, when unusually strong industrial or commercial waste is discharged into the system.

Stalcup said the second and third category rates would be higher than the first rate for the individual residential customer.

The 208 staff will develop a water quality management plan for the entire district during the coming months.

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'On the Banks of the Wabash'

Lilly Monitors

Wabash River T MAR 23 1976
Reveal River

Community Affairs File
Water Cleaner

T MAR 23 1976
By HOWARD STEVENS
Tribune State Editor

CLINTON, Ind. — There's good news for Wabash River backers — the river is cleaner.

In the opinion of the Environmental Controls Department, Eli Lilly & Co., Clinton Laboratories, the firm's monitoring of the river reveals that "the river water quality is in much better shape than it was six years ago when our sampling began."

"Eli Lilly is especially proud of efforts at Clinton Laboratories where many unique environmental control methods were included in the original design. These methods are working in protecting the river from harmful wastewater discharges," M. T. Davis, director of Administration,

Clinton Laboratories, says.

"Our plant was designed to continuously monitor our treated wastewater effluent stream. When such monitoring was later mandated by state and federal law, Clinton Labs had already been doing this for sometime," Davis adds.

How long will monitoring continue?

"Clinton Laboratories fully intends that the monitoring and river sampling program will be an on-going effort to continue learning more about the river and to assess any changes that might occur in the river or a long period of time."

A typical day of river sampling begins at Montezuma and continues to a point near Terre Haute. Along the 26-mile stretch, 60 samples are taken of the river water.

Checked by environmental control department employes Bill Laufman, Bill Barker, Jim Sullivan and Bob Trench are dissolved oxygen, water temperature, width, depth and flow. Samples are taken on the left side, middle and right side of the river at each of 20 sampling points. Later, assay tests are run on the sample water by technicians at the laboratory.

"Our sampling of the river is entirely a voluntary monitoring effort. The results of this monitoring have been shared with the Indiana Stream Pollution Control Board in an effort to expand the total volume of knowledge of the Wabash River in this area," Davis says.

Are mussels coming back to the river?

"We are not experts in limnology, but we have noticed that there is a sizable mussel population at certain locations in the river," Davis adds.

In an era which has seen frequent accounts of dead lakes and rivers discovered throughout the U.S., it is encouraging to know that Eli Lilly is concerned about the quality of water in the Wabash River and is doing something about it. We thought you would like to know.

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Indpls. Star
SATURDAY, APRIL 13, 1974

THE INDIAN

Coal Firm Agrees On Action To Halt Pollution Of Wabash By Abandoned Vigo County Mine

The Peabody Coal Company has agreed to take steps to halt pollution of the Wabash River caused by 34 acres of coal waste piles at an abandoned coal mine about 3½ miles northwest of Terre Haute, it was learned yesterday.

The Environmental Protection Agency in a complaint filed against the company Oct. 17, 1972, charged that fine coal particles and acid mine drainage were polluting two creeks and the Wabash River as a result of the waste piles and the yards of the abandoned Snow Hill coal mine in Vigo County.

RICHARD L. DARST, assistant United States Attorney, said the Peabody firm has agreed to take pollution abatement steps worked out in a consent decree signed by Federal Judge S. Hugh Dillin Thursday.

The pollution abatement program has been estimated to

cost \$500,000 by the Peabody firm and \$250,000 by the EPA, according to Darst, who said the program must be completed by Jan. 1.

The areas involved "will be appropriately engineered to support a healthy stand of grass," according to the consent decree.

Features of the mine environs "which cause any pollution of water will be changed to cause a substantial abatement of any water pollution," the decree stated.

THE TWO coal piles are to be contoured and all erosion gullies filled in the abatement program.

The decree also calls for establishment of stream sampling stations on the two Wabash tributaries, Coal Creek and North Coal Creek.

Samplings from the creeks are to be reported to the EPA monthly, according to the decree.

Darst said EPA filed suit

against the firm after it was learned the two creeks turned yellow from the amount of acid mine drainage going into them.

THE TWO CREEKS flow into the Wabash about 1½ miles from the abandoned mine site, Darst said.

Coal particles could be scooped from the creeks and from the Wabash, according to Darst.

If the abatement program is not completed by Jan. 1, Dillin may order the work completed, Darst said.

The decree set out the following deadlines for portions of the abatement control program:

Cleaning areas, July 1; grading and shaping, Aug. 1, ground covering, Oct. 1, and soil treatment and seeding, Nov. 1.

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Hartke Joins Area Groups

Seeking Analysis of Water

Hartke Joins

DEC 19 1974

Continued From Page One.

Amid growing concern over the quality of water for human consumption, Sen. Vance Hartke today called for an in-depth, scientific analysis of all sources of drinking water in the Wabash River basin.

Hartke and two organizations devoted to land and water resource development in the Wabash River Valley have joined forces to see that the waters of the Wabash and its tributaries are fit for human use.

The senior senator from Indiana is working with Irvin Schenk, chairman of the board,

Community Affairs File

Wabash Valley Association (WVA); Maynard Wheeler, president, WVA, and George Gettinger, executive director, Wabash Valley Interstate Commission, to inaugurate a plan for analyzing drinking water sources in the area.

The focal point of such a study would be, of course, the Wabash River and its tributaries—a system draining 33,000 square miles of land and providing water for more than four million Hoosiers in 66 of Indiana's 92 counties. From its source near Fort Wayne, the

river basin extends downstate, encompassing more than 300 Indiana communities, until it meets the Ohio River near Mt. Vernon.

Hartke explained that historically, the basin has been plagued by floods and pollution.

"Tons of valuable and irreplaceable topsoil, together with incalculable amounts of property—and lives—have been lost over the years to the forces of uncontrolled water. Likewise, much fish and wildlife habitat, recreational opportunity and human health have been destroyed or endangered by the effects of pollution," said Hartke.

"Fortunately, the seriousness of these water problems was recognized before the people of the Wabash Valley were overwhelmed. Largely because of men like George Gettinger, Irvin Schenk and Maynard Wheeler—and their forerunners—Congress responded to the needs of the Wabash Valley with a program of flood and pollution control," he added.

The senator noted that since the early 1950s, six major multipurpose reservoirs and scores of smaller watershed projects

and local levees have been constructed in the valley.

Those efforts have reduced flooding, enhanced recreational opportunity and provided more stable water supplies for municipal and industrial use.

Additionally, the program has led to the possibility of opening up the Wabash River to navigation, tapping the region's vast food and coal reserves.

"Making the Wabash navigable will one day transform southwestern Indiana from a virtual 'Appalachia West' into a thriving, booming 'Water Wonderland,'" commented Wheeler, a long-time supporter of opening the local river to navigation.

In fact, the WVA has regu

Continued On Page 7, Col. 2.

was 'no way' to divorce early sent representatives to Washington, D.C., to meet with various officials and congressmen in an attempt to gain support for improvement of the river.

"Having met the problems of flood control and water supply more than halfway, the next great challenge is to insure that every man, woman and child in the Valley has safe drinking water," declared Hartke.

Noting that existing water analysis in the Basin consists largely of tests for inorganic substances, Hartke said, "Monitoring must be expanded to look for the newer organic compounds which are being used increasingly in agriculture and industry. We have the technological capability to look for these newer and potentially harmful ingredients. The health and well-being of our people is reason enough to apply that technology."

Hartke said he and his staff will work closely with both the WVA and the Wabash Valley Interstate Commission to draw up a plan for water testing. He indicated that implementation of that plan would ultimately involve every level of government together with elements of

the private sector.

"In the end, we want nothing less than a successful model of water analysis which can be applied in every river basin and watershed in this country," Hartke explained.

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